SCHEME & SYLLABUS

Master of Architecture

Specialisation- Urban Design

(2013)

University of Kerala
Scheme of Studies for Master of Architecture

Stream : *Urban Design*
Semester 1

Code No.	Name of Subject	Credits	Hrs / week	End Sem Exam (Hours)	Marks			Remarks
					Internal Continuous Assessment	End Semester Exam	Total	
AUM 1001	Statistics	3	3	3	40	60	100	Of the 40 marks of internal assessment , 25 marks for test and 15 marks for assignment End-of-Semester Exam by University
AUC 1001	Urban Design – History, Theory, Practice and Process	3	3	3	40	60	100	-do-
AUC 1002	Urban Morphology	3	3	3	40	60	100	-do-
AUC 1003	Urban Planning Techniques and systems	3	3	3	40	60	100	-do-
AUC 1101	Urban Design Studio-I	7	14	---	200	100	300	Of the 200 marks of internal assessment, 30 marks for seminar and 170 marks for studio work. End semester Jury
	TOTAL	**19**	**26**		**360**	**340**	**700**	

University of Kerala
Scheme of Studies for Master of Architecture

Stream : *Urban Design*
Semester 2

Code No.	Name of Subject	Credits	Hrs / week	End Sem Exam (Hours)	Marks			Remarks
					Internal Continuous Assessment	End Semester Exam	Total	
AUC 2001	Planning Legislation and Development Management	3	3	3	40	60	100	Of the 40 marks of internal assessment, 25 marks for test and 15 marks for assignment. End-of-Semester Exam by University
*	Elective -1(Stream Elective 1)	3	3	3	40	60	100	-do-
*	Elective – 2 (Departmental Elective)	3	3	3	40	60	100	-do-
ACC 2000	Research Methodology	3	3	3	40	60	100	Of the 40 marks of internal assessment, 25 marks for test and 15 marks for assignment. End-of-Semester Exam by Institution
AUC 2101	Urban Design Studio-II	8	16	---	200	100	300	Of the 200 marks of internal assessment, 30 marks for seminar and 170 marks for studio work. End semester Jury
	TOTAL	**19**	**27**	**---**	**360**	**340**	**700**	

Electives for semester 2:

Stream Electives 1

Sl No.	***Code No.***	***Subject***
1	AUE2001	Transportation and Urban Form
2	AUE 2002	Contemporary Design Theories and Criticism
3	AUE 2003	Urban Conservation and recycling
4	AUE 2004	Comparative Urbanism

Departmental Electives

Sl No.	***Code No.***	***Subject***
1	ADE 2001	Sustainable Settlement Planning
2	ADE 2002	Planning for Tourism
3	ADE 2003	Real Estate Development
4	ADE 2004	Urban Sociology

* Students can choose Elective 1 and Elective 2 from the lists of *Stream Electives and Departmental Electives*, respectively.

University of Kerala
Scheme of Studies for Master of Architecture

Stream : *Urban Design*
Semester 3

Code No.	Name of Subject	Credits	Hrs / week	End Sem Exam hours	Marks			Remarks
					Internal Continuous Assessment	End Semester Exam	Total	
AUC 3001	Infrastructure Planning and development	3	3	3	40	60	100	Of the 40 marks of internal assessment, 25 marks for test and 15 marks for assignment. End-of- Semester Exam by Institution
*	Elective 3(Stream Elective-2)	3	3	3	40	60	100	-do-
**	Elective 4 (Non Departmental Elective)	3	3	3	40	60	100	-do-
AUC 3101	Urban Design Studio-III	8	16	---	200	100	300	Of the 200 marks of internal assessment, 30 marks for seminar and 170 marks for studio work. End semester Jury
AUC 3102	Dissertation	3	3	---	50	---	50	No End-of-semester Exam
AUC 3103	Practical Training	2	--	--	50	---	50	-do-
	TOTAL	**22**	**28**	**---**	**420**	**280**	**700**	

Electives for Semester 3:

Stream Elective2

Sl No.	*Code No.*	*Subject*
1	AUE3001	Sustainable Cities and Environmental Impact Assessment
2	AUE3002	Urban Geography
3	AUE3003	Future of Cities
4	AUE3004	Urban Housing

Non-Departmental Electives:

Sl No.	*Code No.*	*Subject*
1	ADI3001	Sustainable Development and Architecture
2	ADI3002	Sustainable Infrastructure & Technology
3	ADI3003	Earthquake Resistant Design and Management
4	ADI3004	Climatology and Built environment
5	ADI3005	Urban Design-Theories and Principles

* Students can choose Elective 3 from the lists of *Stream Electives 2* as advised by the course coordinator.
***Non-departmental electives* should be selected from the list of inter-disciplinary electives **offered by other departments**, as advised by the course coordinator.

University of Kerala
Scheme of Studies for Master of Architecture

Stream : *Urban Design*
Semester 4

Code No.	Name of Subject	Credits	Hrs / week	*Evaluation(Marks)*					Remarks
				Internal		External		Total	
				Sessional	Guide	Thesis	Viva Voce		
AUC 4001	Urban Systems Management	3	3	40 (Continous assessment)	-	60 (End Semester Exam)	-	100	Of the 40 marks of internal assessment, 25 marks for test and 15 marks for assignment. End-of-Semester Exam by Institution
AUC 4101	Thesis	12	24	75	75	50	50	250	Viva Voce by University
	TOTAL	**15**	**27**	**115**	**75**	**110**	**50**	**350**	

Note: 4 to 6 hours per week is for department assistance

SEMESTER1

AUM 1001 STATISTICS

(Common with APM 1001)

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: The course in statistics helps the student tackle problems in decision making. The student is introduced into data modeling techniques.

Module I

Linear Correlation, regression - lines of regression - Multiple Correlation and regression.
Sampling:
Sampling Techniques, Random sampling, stratified sampling, cluster or area sampling, system sampling.

Module II

Probability distributions: Discrete and Continuous Probability distribution- Mean and Variance- Binomial, Poisson and Normal Distributions.
Statistical Inference: Internal Estimation – Confidence limits for the mean and proportion of a normal population in large and small samples.
Testing of Hypothesis: Testing the mean and proportion of a population.Chi-square test for goodness of fit.
Analysis of variance- One way and two way classifications.

Module III

Linear Programming Problems
General LPP- Basic Feasible Solution (BFS) – Optimal Solution- Solution by Simplex Method- Artificial Variable (Big M) Technique-Assignment Problem – Formulation- Hungarian Method- Transportation problems- Formulation – Initial BFS by Vogel's approximation – Optimal Solution by MODI Method.

Reference:

1. Operations Research – SD Sharma – KedarnathRamnath& Co.
2. Miller and Freunds- Probability and Statistics for Engineers
3. Walpole Myers- Probability and Statistics for Engineers and Scientists.
4. S.C Gupta, V.K Kapoor- Fundamentals of Mathematics and Statistics.
5. Elhance- Statistics

Structure of the Question Paper

For the End Semester Examination the question paper will consist of at least 60% analytical problems. There will be three questions (with sub-divisions) from each module out of which two questions are to be answered.

AUC 1001 URBAN DESIGN – HISTORY, THEORY, PRACTICE AND PROCESS

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives:

- To acquaint students of the historical background of urban design and to know how cities evolved, various forces that played crucial role in the evolution of cities.
- To have a detailed knowledge of theories and concepts that drives Urban Design.
- To critically examine the processes involved in Urban Design.
- To understand the issues of Urban Design in the present day context of globalised city.

Module 1

History: The historical background would deal with the overall history and the social, economic, political factors that resulted in creation of distinct urban form. Western and Indian history would form the basis of the study.

Brief historical overview- ancient cities – Greece –Rome- medieval cities- Industrial revolution slums- City beautiful Movement- Garden City concept- world wars and aftermath on rise of modern cities- skyscrapers- New York city.

Indian historical developments- principles of city and town planning- Indraprastha and Nine square plan of Jaipur-colonial cities- Chennai- Mumbai-Calcutta.

Module II

Introduction to theories of urban design- Place theory, linkage theory etc,- Post-modern urbanism, Lynch's ideas of good city form, imageability and memory, - public and private domains, suburbs and periphery- Privacy, Territoriality and Proxemic theory, Defensible spaces , ideas of community through design-Current hypothesis on children and urban environment.- ideas of smart growth- New Urbanism-landscape Urbanism.

Module III

The study of building typology in relation to the city- Concepts of Aldo Ross- City as a visual matter, philosophy of perception, comprehension of the environment through visual examination, serial vision, place, content, etc based on the concepts of Gorden Cullen- Perception of movement and clarity/ legibility in the cityscapes, concepts of Kevin Lynch-Lattice and the underlying principles expressed in an abstract pattern- Edmund Bacon's work on city design based on the movement system- "Learning from Las Vegas" tools developed for analyzing the traditional urban spaces in a new kind of space

References:

1. Ron Kasprisin - URBAN DESIGN the composition of complexity.
2. Edmund Bacon - Design of Cities.
3. Uma Sankar - Urban Design in the Indian Context: A case study of Bombay.
3. Trancik, Roger - (1986) *Finding Lost Space: Theories of Urban Design* (New York: Van Nostrand Reinhold)
4. N. Ellin - Postmodern Urbanism
5. Spiro Kostof - Cities shaped.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

AUC 1002 URBAN MORPHOLOGY

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: To explore spatial, functional and historical transformations in built environments.

Module I

Introduction to morphology - Determinants of urban form and structure - Size, shape and form of cities.

Module II

Components and structure. Concept of typologies. Elements Entities and the Whole. - Meaning and morphology- Symabolism, icons and other meaning markers. - Units of urban design intervention

Module III

Methods of urban design survey and documentation.

Urban form and space seminar: To discuss changing attitude towards Urbanism and Urban space.

References:

1. James E. Vance - The continuing city: urban morphology in Western civilization.
2. Michael R. G. Conzen, Michael P. Conzen - Thinking About Urban Form: Papers on Urban Morphology, 1932-1998.
3. Balmiki Bhattacharya - Study of an Urban Morphology: Jaisalmer, India.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

AUC 1003 URBAN PLANNING TECHNIQUES AND SYSTEMS

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: This is a core subject that informs the student about various methods and techniques used in the process of planning. It is also an introduction to planning and therefore focuses on technology, latest methods of assessing information explaining the basic definitions of planning.

Module I

Concepts and theories of planning and their applications as master plans, development plans, structure plans etc. planning terms and their definition, planning process, acts and development norms, concepts of zonal plans, area development plans, development schemes, urban renewal, redevelopment, city development plans, planned unit development etc. concept of landuse zoning regulations, mixed use developments, special economic zones etc.

Module II

Planning tools, planning standards, planning models, planning surveys and sampling, evaluation of planning requirements from first principles - master plan, work studies, town planning schemes etc. overview of legal framework and statutory aspects of planning: town planning acts, land acquisition act and process, other land management techniques, economic planning theories and public participation in planning process.

Module III

Preparation of regional development plans, various approaches to comprehensive planning, systems approach to planning, case studies identifying use of various planning techniques, GIS and land information systems, ariel photography, photogrammetry and photo interpretation, remote sensing techniques, data interpretation and preparation of metric maps, applications of these techniques in the planning process.

References:

1. Zhenjiang Shen - Geospatial Techniques in Urban Planning.
2. Richard E. Klosterman - Community Analysis Plan.
3. Douglass B. Lee - Models and techniques for Urban Planning.
4. Thomas Telford - Design: Urban Design in the Planning System.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

AUC 1101 URBAN DESIGN STUDIO-I

Structure of the course:

Credits: 7
Studio: 14 Hours/ week
Internal Continuous Assessment: 200 marks
End Semester Jury Examination: 100 marks

Objective: To provide the student with studio skills related to contemporary techniques and tools of urban design.

The studio will be divided to the following four modules:

- Documentation and presentation techniques of a precinct.
- Documenting the same precinct from infrastructure and urban management standpoint.
- Documenting the same precinct statistically and as a human network, through ownership, use cycles, association value etc.
- Identification of problems and issues. Compiling the documentation as a report.
- Conceptual Design Scheme.

The Design Workshop:

The workshop is a seminar course conducted by invited professionals who may demonstrate the design development process of project, funding and management issues. This is an interactive session in which students will directly interact with the professional after the presentation. Projects may vary in scale and content and should preferably raise urban level or fundamental design issues.

SEMESTER-II

AUC 2001 PLANNING LEGISLATION AND DEVELOPMENT MANAGEMENT

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: Legislation is the backbone of any planned intervention, through this subject the student is expected is be informed about the process used in India and critical laws which help the planned process to function.

Module I

Meaning, significance and objectives of planning legislation, evolution of planning legislation in India, constitutional basis and provisions relating to land its development and its use, statutory powers and responsibilities of Central Government, State Government and Union Territories, Local Bodies and Local Authorities with respect to urban development and their legal structure, overview of legal tools for urban planning and development (town and country planning, improvement trust, development authorities etc.).

Module II

Town Planning Act of India and their implementation strategies, objectives, contents, and procedures for preparation and implementation of regional plans, development plans, town planning schemes, area plans etc. overview of development control regulations – zoning, sub division regulations, building regulations and bye-laws, legislation for land acquisition and land ownerships including rural and urban land ceiling act and their implications on development, legislation on conservation of natural and manmade resources including coastal zone regulations, air and water (prevention and control) of pollution act, mining and forestry act, conservation and management of ancient monuments and archeological sites and remains act etc.

Module III

73rd and 74th constitutional amendment and their effect on development management, critical appraisal of legislation for public-private partnerships in urban development and infrastructure projects, land management tools like TDR, accommodation reservation, land pooling, plot reconstitution etc. development financing and intergovernmental fiscal relations, role of various

financing institutions and capital investments in urban development, role and responsibility of planning consultants and interdisciplinary groups in project formulation including consultancy agreements and contracts in development projects and case studies of landmark judgments pertaining to urban development.

References:

1. Ministry of Health, Government of India - Report of the Committee on Model Planning Legislation.
2. Mohammad Naseem - Environmental Law in India.
3. A. Joshi - Town Planning Regeneration of Cities.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

ACC 2000 Research Methodology 2-0-0-2

Structure of the Course

Lecture : 2 hrs/ Week Credits : 2
Internal Continuous Assessment : 40 Marks
End Semester Examination : 60 Marks

Course Objective:

To formulate a viable research question
To distinguish probabilistic from deterministic explanations
To analyze the benefits and drawbacks of different methodologies
To understand how to prepare and execute a feasible research project

Outcome

Students are exposed to the research concepts in terms of identifying the research problem, collecting relevant data pertaining to the problem, to carry out the research and writing research papers/thesis/dissertation.

Module 1

Introduction to Research Methodology - Objectives and types of research: Motivation towards research - Research methods *vs.*Methodology. Type of research: Descriptive *vs.*Analytical, Applied *vs.* Fundamental, Quantitative *vs.* Qualitative, and Conceptual*vs.* Empirical.

Research Formulation - Defining and formulating the research problem -Selecting the problem - Necessity of defining the problem - Importance of literature review in defining a problem. Literature review: Primary and secondary sources - reviews, treatise, monographs, patents.Web as a source: searching the web. Critical literature review - Identifying gap areas from literature review - Development of working hypothesis.

Module 2

Research design and methods: Research design - Basic Principles- Need forresearch design — Features of a good design. Important concepts relating to research design: Observation and Facts, Laws and Theories, Prediction and explanation, Induction, Deduction. Development of Models and research plans: Exploration, Description, Diagnosis, Experimentation and sample designs.Data Collection and analysis: Execution of the research - Observation and Collection of data - Methods of data collection - Sampling Methods- Data Processing and Analysis strategies - Data Analysis with Statistical Packages - Hypothesis-Testing -Generalization and Interpretation.

Module 3

Reporting and thesis writing - Structure and components of scientific reports -Types of report - Technical reports and thesis - Significance - Different steps in the preparation, Layout, structure and Language of typical reports, Illustrations and tables, Bibliography, referencing and footnotes.Presentation; Oral presentation - Planning - Preparation -Practice - Making presentation - Use of audio-visual aids - Importance of effective communication.

Application of results of research outcome: Environmental impacts –Professional ethics - Ethical issues -ethical committees.Commercialization of the work - Copy right - royalty - Intellectual property rights and patent law - Trade Related aspects of Intellectual Property Rights - Reproduction of published material - Plagiarism - Citation and acknowledgement - Reproducibility and accountability.

References:

1. C.R Kothari, Research Methodology, Sultan Chand & Sons, New Delhi,1990
2. Panneerselvam, “Research Methodology”, Prentice Hall of India, New Delhi, 2012.
3. J.W Bames,” Statistical Analysis for Engineers and Scientists”, McGraw Hill, New York.
4. Donald Cooper, “Business Research Methods”, Tata McGraw Hill, New Delhi.
5. Leedy P D, "Practical Research: Planning and Design", MacMillan Publishing Co.
6. Day R A, *"How to Write and Publish a Scientific Paper"*, Cambridge University Press, 1989.
7. Manna, Chakraborti, “Values and Ethics in Business Profession”, Prentice Hall of India, New Delhi, 2012.
8. Sople,” Managing Intellectual Property: The Strategic Imperative, Prentice Hall of India, New Delhi, 2012.

AUC 2101 URBAN DESIGN STUDIO-II

Structure of the course:

Credits: 8
Studio: 16 Hours/ week
Internal Continuous Assessment: 200 marks
End Semester Jury Examination: 100 marks

Objective: The objective of this studio is to sensitise and introduce students to inner city regeneration and related 'brown field' projects.

The studio exercise will examine issues of inner city regeneration and interventions through economic, environmental, urban conservation, participatory and infrastructure provision –led objectives.

The theoretical principles of site planning with respect to natural features and environment, typology, Morphology and density patterns would be examined. The project definition, program development, design and development process, and implementation framework would form integral part of the project structuring

Direct involvement of user groups and decision making agencies as part of the project to target appropriate development strategies, feedback and interactive sessions to achieve workable economic and environmental; regeneration objectives.

Finally to diagnose implications of suggested interventions on the larger urban fabric to re examine values in terms of social, physical, and the progressive nature of change.

SEMESTER-III

AUC 3001 INFRASTRUCTURE PLANNING AND DEVELOPMENT

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objective: To develop an insight amongst the students on components, process, and financing mechanisms of infrastructure development and its impact on qualitative and quantitative aspects of urban built environment and related social and economic issues.

Module1

Concepts in urban infrastructure. Social and Physical infrastructure - Components of the city economy and related development policies, urban agenda, resource development options and strategies, prospects of urban growth and specialize roles etc. - Urban social infrastructure – qualitative and quantitative techniques of assessing requirements, Planning Amenities and institutions. - Public and private sector role in resource mobilization and infrastructure development and related issues.

Module II

Financing systems, sources of finance, leasing and contracting methods, pricing and financing, major National and International agencies involved in infrastructure provisions. - Managing infrastructure development, corporatization and related goals, decentralized and people led infrastructure provisions, social goals and equity, environmental and economic issues and assessments etc. related to physical infrastructure. - Quality control mechanisms, institutions and instruments of resource mobilization, lessons from success and failure, new opportunities and initiative in infrastructure development and management. - Case studies from Asian cities of successful and innovative infrastructure provisions, and equitable economic development, management and maintenance schemes.

Module III

Concepts of decentralization of development and management. - Introduction to urban management - Evolution and structure of urban development bodies. - Nagarpalika Bill (74^{th} Amendment) and hierarchical structure of urban development bodies and development financial structure. - Agenda 21 and good practices from Asian countries.

References:

1. "Jay M. Stein"; "Public Infrastructure Planning and Management".
2. "Peter Schübeler"; " Participation and Partnership in Urban Infrastructure Management"
3. "Jonathan Lewis Gifford, D. R. Uzarski, Sue McNeil, American Society of Civil Engineers. Committee on Facility Management, American Society of Civil Engineers Committee on Urban Transportation Economics."; "Infrastructure planning and management".

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

AUC 3101 URBAN DESIGN STUDIO-III

Structure of the course:

Credits: 8
Studio: 16 Hours/ week
Internal Continuous Assessment: 200 marks
End Semester Jury Examination: 100 marks

The project definition, program development, design and development process, and implementation framework to form integral part of the project structuring

Direct involvement of user groups and decision making agencies as part of the project to target appropriate development strategies. Feedback and interactive sessions to achieve workable economic and environmental; regeneration objectives.

Finally to diagnose implications of suggested interventions on the larger urban fabric to re examine values in terms of social, physical, and the progressive nature of change.

Deal with significant urban area that has strong potential for Urban development.

The studio should end up in complete design proposals including urban structure, control, guidelines and other mechanism.

AUC 3102 DISSERTATION

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 50 marks

Course Objectives: The objective is to explore an Urban Design related issue. Theoretical aspects would be explored and suggestions are proposed. This exercise is taken up as to widen and enrich the literature pertaining to a topic of research.

It may focus upon cross section of literature of a topic with or without research hypothesis. Finally a format report written systematically is needed to be submitted. The material written systematically may be useful in fourth semester when the same topic with literature reviewed systematically be confined as a part of thesis.

AUC 3103 PRACTICAL TRAINING

Structure of the course:

Credits: 2
Internal Continuous Assessment: 50 marks

Course Objective: To acquaint the student of real time practices in Urban Design related projects. The students are encouraged to identify case studies and perform critical appreciation of it based on site studies.

The practical Training is of two week duration that can be extended up to a month. On the completion of training period the students should submit a report that would be evaluated.

SEMESTERIV

AUC4001 URBAN SYSTEMS MANAGEMENT

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: This course attempts to provide an exposure to issues of urban system management. The thrust of the course would be to assess the impact of rapid development on these systems and to understand the implications in urban design.

Module I

Urban Systems- Introduction- Classifying urban settlements: Size, Economic status and location- Urbanization Trends- Economic profile of cities- Low income and middle income cities-Rapidly growing middle income cities-High income cities

Module II

Transportation networks within and outside urban areas – communication networks – water systems – Synergetic effects between infrastructure- cities as self organizing innovative complex.

Module III

Condition and Trends of Urban systems and Ecosystems – Globalization- Urban Systems and ecosystem Services-Urban systems as habitat for humans-interrelation with surrounding regions-Creation of global ecosystem pressures-Responding to the environmental and ecological pressure. – Urban Resilience

References:

1. ‘ Albeverio, S.; Andrey, D.; Giordano, P.; Vancheri, A. (Eds.)’, “Dynamics of Complex Urban Systems An interdisciplinary approach”; “ Springer Books”.
2. “International Handbook of Urban Systems: Studies of Urbanization and Migration in Advanced and Developing Countries, Edited By; H S Geyer”
3. “R Ramachandran”; “Urbanization and urban systems in India”
4. “John Urquhart Marshall”; “The structure of urban systems”

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

AUC4101 THESIS

Structure of the course:

Credits: 12
Studio: 24 Hours/ week
Internal Continuous Assessment: 150 marks
End Semester Jury Examination: 100 marks

Course Objective: The main objectives of the thesis are to provide an opportunity to each student to do original and independent study and research on a subject concerning Urban Design.

The student is required to explore in depth and develop a subject of his/her own choice, which adds significantly to the body of knowledge existing in the field of Urban Design and which uses the knowledge he has acquired from theory and design courses previously taken.

The topic of a thesis may be based on concept; comparative, or evaluative and should offer scope to adopt a fresh approach is formulating a concept to developing a methodology effective and useful in the field.

Electives

Stream elective 1

AUE2001 TRANSPORTATION AND URBAN FORM

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: The course aims at imparting knowledge on understanding of urban transportation problems in planners' perspective, definition of the problem, setting clear goals and objectives to serve as guiding factors in the planning process, identification of the causal factors influencing the demand for urban travel and development of relationship between the factors and the travel demand.

Module I

Introduction:

Role and importance of traffic & transportation planning in national development, urban & regional transport systems – features of urban forms and network patterns – Historical overview of transport development. Transport and Socioeconomic Activities, Freight Transportation, Future Developments.

Transportation system and its framework of reference – technological characteristics of transport modes and systems – the nature of demand and supply of transportation modes – road user and the vehicle.

Urban Transportation System Planning - Conceptual Aspects:

Transport Planning Process, Problem Definition, Solution Generation, Solution Analysis, Evaluation and Choice, Implementation, Sequence of Activities Involved in Transport analysis.

Module II

Transportation process:

Trip generation, Trip distribution – Trip assignment – Model split and evaluation – Land use transportation models - Land use transport inter-relationship – Planning for public transport.

Geometric design of roads and intersections, road traffic safety – traffic signals, street lighting, and parking – Urban traffic problems – road capacity – Hierarchy of roads – Design of road layouts – traffic and travel characteristics – segregation of pedestrian and vehicular traffic.

Transportation Surveys:

Traffic surveys – land use, speed, and journey time and delay surveys – Traffic volume surveys – O.D. Survey – parking survey – Transportation survey etc. Comprehensive Traffic and Transport Study (CTTS) and Comprehensive Mobility Plan (CMP).

Module III

Management of transport systems:

Existing organizational and legal framework – traffic and environment – Traffic noise, air pollution – its measures and standards – accident reporting and recording systems – factors affecting road safety.Intelligent Transport Systems.

Norms and guidelines for highway landscape – street lighting types – standards and design considerations – National Transport Policy.

Transport Economics:
Economic evaluation – pricing and funding of transport service and systems – economic appraisal of highway projects, Traffic safety and solutions.

References:
1. Kadiyali L.R. “Traffic Engineering and Transport Planning”, Khanna Publishers, New Delhi, 1991.
2. Subhash C. Saxena, “A Course in Traffic Planning and Design”.
3. Dalvi M.Q. and Sharma R.C., “National Transport Policy for Urban Settlements – Seminar on Transportation Systems in Urban Settlements – TCPO, New Delhi – 1982.
4. Kadiyali L.R.., “Principles and Practice of Highway Engineering”.
5. The Royal Commission on Environmental Pollution Report – The Transport and Environment, Oxford University Press, 1995.
6. William W. Hay, “An Introduction to Transportation Engineering”, John Wiley & Sons Inc., NY.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Stream elective 1

AUE 2002 CONTEMPORARY DESIGN THEORIES AND CRITICISM

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: To expand knowledge and to intensify one's critical abilities in evaluating and discussing design tactics for an urban architecture grounded in the history of disciplinary knowledge. The course enable students to draw connections between the ideas presented in the lectures and readings, and their impact on an increasingly urbanizing world, and the ways in which design can play a meditative role in the construction of the urban environment.

Module I

Historic perspective on design theory and its impact on cities in Asia and other countries. - Contemporary theories and movements in art, in architecture and urbanism

Module II

Techniques and tools of criticism - Building and space analysis. Locating subjects in context.

Module III

Structure of reviews. Book and film reviews, building reviews and critical nalysis of new settlements/precincts. - Review of an Architect's design theory. Criticism by critics and other literary figures.

References:

1. Michael Southworth, University of California, Berkeley. Institute of Urban & Regional Development - Theory and practice of contemporary urban design:a look at American urban design plans.
2. David Grahame Shane - Recombinant urbanism: conceptual modeling in architecture, urban design, and city theory.
3. Matthew Carmona, Tim Heath, TanerOc, Steve Tiesdell - Public Places Urban Spaces: The Dimensions of Urban Design.
4. Kenneth Kolson - Big Plans: The Allure and Folly of Urban Design.
5. Roger Trancik - Finding Lost Space: Theories of Urban Design.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Stream elective 1

AUE 2003 URBAN CONSERVATION AND RECYCLING

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: To equip students to deal with urban conservation and recycling along with related design issues of existing urban environment, old cities natural and urban heritage areas.

Module I

Interactive session of History heritage and cities, traditional water systems.-

Introduction to conservation historic and inner city areas and other natural elements.- Concepts and approaches to conservation in India and other countries.- Socio-economic development, tourism infrastructure development, and role of urban conservation

Institutional Aspects of Conservation

Characters- World Heritage Legislation and Sites- Conservation Acts & Legislation- Archeological Acts- Institutional frame work for conservation in India and other countries.

Module II

Historic overview of recycling cities- Conservation Area practice, adaptive reuse, up gradation programs in old areas, infill design- Financial and Implementation framework for urban conservation and Adaptive Reuse Projects- Urban recycling and brown field projects, urban renewal and development strategies for regeneration of inner cities areas.

Conservation management, community participation, economic regeneration upgrading infrastructure, financing and implementation frame work for redevelopment and revitalization projects.

Module III

Legislation frameworks and institutional framework for special areas, urban conservation, and urban recycling.

Recent successful practices in urban conservation and regeneration in India and other countries.

References

1. Nahoum Cohen - Urban conservation.
2. Lecturesedited by GregersAlgreenUssing - Urban Space and Urban Conservation as an Aesthetic Problem.
3. Jamie MacKee - Evaluation in Urban Conservation: Case Studies on the Application of evaluation in conservation decision-making for the inclusion of cultural Built Heritage in Modern Urban Centres.
4. Donald Insall - Living Buildings: Architectural Conservation : Philosophy, Principles and Practice.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Stream elective 1

AUE 2004 COMPARATIVE URBANISM

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: This subject introduces the student to urbanism in the Asian context, its many facets compared to western cities, both functionally and in form.

Module I

Types of Indegenous contemporary settlements. – Comparison of functional structure of Western and Asian cities.

Module II

Nature of city form, climate, typologies, public space systems and architectural expression. – Cross – cultural influences in the development of city.

Module III

Historic cores and contemporary urbanism. – Issues of growth and value additions in the context of globalization.

References:

1. Paul Meadows, Ephraim Harold Mizruchi - Urbanism, urbanization, and change: comparative perspectives.
2. Dr Jenny Robinson - Ordinary Cities: Between Modernity and Development.
3. Xiangming Chen, Ahmed Kanna - Rethinking Global Urbanism: Comparative Insights from Secondary Cities.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Departmental elective

ADE2001 SUSTAINABLE SETTLEMENT PLANNING

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: This course attempts to throw light on sustainability issues related to planning. The outcome would be to make the learner aware of sustainability issues in planning.

Module I:-Sustainable Development and Planning- Introduction

Concept of Sustainability- Energy use and Climate change- The concept of Sustainable Planning and its relevance- Eco villages – Villages, neighbourhood and community – Historical background of village – Influence of modernity and changes in locality based village forms

Module II:- Sustainable settlement planning

Unsustainable settlements – Centralization and concentration of activities – Its problems – Sustainable settlement planning – Eco neighbourhood, ecological townships – Neighbourhood ecosystem - Urban form and locality – Design of Eco friendly neighborhoods.

Eco neighbourhood – Case studies – Sustainable City Programme (SCP) of UNCHS – HABITAT & UNEP – The concepts and case studies – Environmental policies for sustainable city.

Module III: Community and sustainability

Community and sustainability – Changing nature of community – Community based initiation for sustainable development – Community governance – community basis shelter technology -energy consumption in settlements.

References

1. Hugh Barton – Sustainable Communities – The potential for Eco neigbourhoods – Earthscan Publications London, 2000.
2. UNCHS, UNEP – Publications on SCP
3. Dr. R.K. Wishwakarma – Social Formation and Change – ITPI Reader.
4. B.C.Bose, “Integrated approach to sustainable Development”, Rajat Publications, Delhi
5. Caring A.Langston, Grace K.C.Ding, “Sustainable practices in built environment”, second edition, Butterworth-Heinmann Linacre House Jordanhill Oxford.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Departmental elective

ADE2002 PLANNING FOR TOURISM

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives:

The course intends to look at planning aspects for tourism. The knowledge of the impacts and issues regarding tourism will equip the future planners to provide solutions for tourism planning.

Module 1: Introduction to tourism

Definitions, scope, nature, classification and dimension, tourism as an industry, tourism in developed and developing world.

Tourism and environment: Carrying capacity and Sustainable development. Ecotourism. environment and tourism, natural and man-made heritage and tourism development.

Module II- Tourism sector- Impacts

Tourism environment and Society. Tourism and natural environment. Mass tourism and environment.

Environmental impacts of tourism.-Impacts on ecosystems-Impacts on wild life, coastal areas, hill stations, backwaters, eco-sensitive areas heritage sites etc

Tourism impacts- Resource evaluation, Economic effects, socio cultural effects, Physical effects.

Module III: Planning for Tourism:

Nature and scope of a tourism plan- key issues and stages, data requirements, surveys, role of key players/stake holders in tourism policy and planning, sustainable tourism development planning; community planning and tourism; implementation and management, role of travel and tourism promoting agencies, monitoring the tourism development; Tourism marketing – concept, techniques and strategies.

References :

1. C. E. Gearing & W. S. Swart (1976) Planning for Tourism, Prager Publisher.
2. Gareth shaw& Allan M. William. (2002) Critical Issues in Tourism, geographical Perspective,Blackwell.
3. R. Maitland & B. W. Ritchie.(2009) City Tourism-National Capital Perspectivs, CABI. Org.
4. L. C. Harrison & W. Husbands (1996) Practicing Responsible Tourism, J. Willy & Sons.
5. C. Hunter & H. Green. (1995) Tourism & the Environment, London, Routledge.
6. Richards, Grey; Hall, Derek ed. (2000) Tourism and sustainable community development,London, Routledge.
7. Bhatia, A. K. (1982) Tourism Development, principles and practices, New Delhi, Sterling Publishers.
8. Bhatia, A. K. (1978) Tourism in India : History and development, New Delhi, Sterling Publishers.

9. Baud-Bory, Manuel; Lawson, Fred. (1977) Tourism and Recreation Development, London, Architectural Press.
10. Mowforth, Martin; Munt, Ian.(1998) Tourism and sustainability : New tourism in the third world, London, Routledge.
11. Willam Allen. (1990), Heritage Tourism and Society, Manseel Publishing Ltd. England.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Departmental elective

ADE2003 REAL ESTATE DEVELOPMENT

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objective: To familiarise the students to real-estate market mechanisms and their implications on the processes of city development and resource mobilisation

Module I

Introduction and history of real estate development
Principles of real estate value concepts and methods of valuation
Introduction to real property ownership, leasing, property succession, methods of sale/purchase, title search etc.

Module II

Real estate laws and other legal framework
Real estate markets, fluctuations and forecasting, economic cycles, demand and supply, values, assessment techniques, rental structure, speculations, risks, hedging etc. agents and access by different interest groups in real estate markets
Real estate investments and packaging, government policies and industry organisation, international investments like FDI, public private participation and joint ventures, role of real estate development agencies, NRI's and PIO's in the investment market

Module III

Real estate project formulation, development process, asset management, property insurance
Real estate Investment analysis and risk assessment techniques, market surveys and research, portfolio management, marketing and brokerage, rating system in real estate markets etc.
Infrastructure development and quality control, post development management and maintenance in real estate development
Case studies of good practice in development of real estate

References:

1. Mike E Miles, Gale L Bereus, Mark J Eppli and Marc A Weiss, Real Estate Development Principles and Process
2. S P Peca, Real Estate Development and Investment: A Comprehensive Approach
3. Charles Long, Finance for Real Estate Development
4. Rajkumar S Adukia, Real Estate Law Practice and Procedures
5. John Ratcliffe, Mark Shepherd and Michael Stubbs, Urban Planning and Real Estate Development
6. StieveTiesdell and David Adams, Urban Design in Real Estate Development Process
7. Alex Wilson, Jenifer L Uncapher and Lisa McManigal, Green Development Integrating Ecology and Real Estate.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Departmental elective

ADE2004 URBAN SOCIOLOGY

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Examination: 60 marks

Course Objectives: Physical environments shape and are shaped by social life. Urban space is being reconfigured every day. Spatial development has a great impact on urban politics, culture and relationship of cities to the environment. Spatial policy makers are to be aware of these far reaching impacts. This course introduces these to the learners.

Learning Outcomes: To give an introduction to urban sociology and urban studies

Module I

Introduction, basic concepts: Culture, Norms, Values Statues, Role, Social Stratification, Race, Ethnicity, Gender, Caste, Class, Religion, Deviance, Social Control, Social Change

Urbanization, Definitions, urban Structure, Urban ways of life a global analysis of urbanization, Types of Cities, Theories of Urbanization

Historical development of urban form in relation to society, politics and culture; Preindustrial city, Industrial cities and suburbs, Post Industrial Era, Inadian cities, Globalization

Urbanization in India, Urban rural migration

Module II

Urbanism: Urban culture and urban society,

Models of social geography, European Perspectives, Chicago School of Sociology, Social Area Analysis, Factorial Ecology, Gentrification, Suburbanization Race, Class and Spatial Segregation, Inequality and Polarization urban Governance.

Module III

Community in Urban settings: Identity, Difference, Inequality and polarization Crime, Fear of crime, Apartheid

Urban Anomie Theory, Urban eco criticism, Eco Feminism

Social Psychology: Image of the city, mental maps, the production of space geography of gender in the city

Religion and caste in the Indian city

References

1. "Rajendra Kumar Sharma"; "Urban Sociology"
2. "N. Jayapalan"; "Urban Sociology"
3. "William G. Flanagan"; "Contemporary Urban Sociology"

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Stream elective 2

AUE3001 SUSTAINABLE CITIES AND ENVIRONMENTAL IMPACT ASSESSMENT

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: Sustainability of cities and the related EIA have become important issues that guide urban design and development. This course is designed to expose the student to the concerned issues so as to interact effectively with the environmental planner.

Module I

Introduction to concepts of Sustainability. Nature as the primary layer – urban development as the secondary layer. - What makes today's cities unsustainable? Nature, Built heritage and community networks. Cities as centres of consumption of land, water, energy resources and forest cover.

Module II

Cities as generators of waste. Solid waste, sewage, soil and ground water contamination, air pollution, destruction of food chains. - Issues of public health and sustainability. - Need to reduce consumption. Circular metabolism and linear metabolism. Concepts of equity. Slums as an issue of sustainability. - Impact of technologies on sustainability I.T and biotechnology, Energy research and control of water.

Module III

Role of EIA in the planning process. - Definitions and need, evolution and objectives, tasks & Scope. - Methods of EIA advantages and limitations - Assessment of impacts on resources and land use. - Assessment of social and health impact. - Public participation - Legal participation - Legal framework for EIA - International and national agencies and pressure groups for environmental and social assessment.

References:

1. "Rachel Cooper, Graeme Evans, Christopher Boyko"; "Designing Sustainable Cities"
2. "Graham Haughton, Colin Hunter"; " Sustainable Cities".
3. "Richard K. Morgan"; "Environmental Impact Assessment: A Methodological Approach".

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Stream elective 2

AUE3002 URBAN GEOGRAPHY

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: The objective of this course will be to understand the processes that give rise to the spatial arrangement of urban phenomena, and will involve four elements: patterns, philosophical approach, theory, and techniques.

MODULEI

Introduction to urban geography – cognition, perception and spatial representation. - Renaissance and the reconfigurement of space. Astronomy and city structure. - VastuShastra and the integrated world view. Ideal space diagram and city form. - Industrial revolution, Technologies and the 19^{th} century transformation of world views. Comprehenssion of time-space and the birth of suburbia. Idealised space romanticism and the garden city movement

MODULEII

Scared geographies, sacred cities precincts and spaces. Sacred rivers, ghats mounds, trees and other totems in urban space. Mapping - Cognitie mapping – contemporary and traditional methods of representation.

MODULEIII

Rhythms of the city. Modern work rituals and the definition of time, fragmented zones, space and lives. Nightlife and electronic defeinition of time - Signification signs and meaning structure - Imagined places collaging time –space representations in literature, cinema and the performing arts.

References:

1. “Michael Pacione”; “Urban geography: a global perspective”.
2. “Tim Hall”; “Urban Geography”.
3. “David Kaplan, James O. Wheeler, Steven Holloway”; “Urban Geography” .

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.

Stream elective 2

AUE3003 FUTURE OF CITIES

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objectives: To develop a fundamental understanding of the major issues that are behind the emerging concept of Smart Cities that will see the simultaneous presence and interactions of highly distributed generation, demand response, storage, multi-energy networks, smart devices, and new business models.

Module I

Evolution of urban settlements, economic systems, political power structure and city formations - Industrial revolution and urbanization - Contemporary cities- New urbanism, cities within cities.

Module II

New Technologies and city form - Wired cities, globalised cities and controlled districts, pricing, exclusion and information highway and the breakdown of national boundaries.

Module III

Future as the future of people – parallels in human development and urban development - Loss of place, breakdown of identities and formation of new class structure - Biotechnology and the loss of rural identities. The fusion of town and country.

References:

1. "UNHABITAT"; "The Future of Cities".
2. "B. Bhattacharya"; "Urbanization, Urban Sustainability and the Future of Cities".
3. "Jane Alison, Barbican Art Gallery"; "Future city: experiment and utopia in architecture".

Structure of the Question Paper

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Stream elective 2

AUE3004 URBAN HOUSING

Structure of the course:

Credits: 3
Lecture: 3 Hours/ week
Internal Continuous Assessment: 40 marks
End Semester Jury Examination: 60 marks

Course Objective:

- The student will gain in depth knowledge regarding developments in housing layout and patterns across place and time.
- The course aims to throw light on the impact of mass housing on the existing urban environment and life of people.

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Module I

Housing conditions of early 19th century- New York and Cities of Britain – slums- Railroad Plan- Dumbell Plan- Walk Up Apartments- Graden City Movement- Vehicle ownership- Congestion- Suburb formation- Sprawl.

Module II

Neighbourhood concept- Radburn Layout- Modernist ideas in housing projects – Failures- Pruitt Igoe- Apartments in Sky -Excursions on density- Woonerf Concept – New Urbanism and housing – Pod Development- Concepts of healing and weaving

Module III

Case studies on housing- International and Indian housing projects- Aranya project – CIDCO housing.- works of Architects on housing such as Ben Van Berkel, Kees Christiaanse, Steven Holl, MVRDV, UN Studio and OMA.

References:

1. "Carles Bronto"; "Innovative Public Housing"; Gingko Press;2005.
2. " Adrienne Schmitz;; Urban Land Institute;2001"; "Multi family Housing Development Handbook".
3. "Vincene Guillart; Sociopolis"; "Project for a city of the future"; ACTAR;2004.

Structure of the Question Paper

For the End Semester Examination the question paper will have three questions (with sub-divisions) from each module out of which two questions are to be answered.